## KANSAS CORPORATION COMMISSION ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST

Type Tes	it:				(	(See Instruct	ions on Rev	ersa Side	<b>9</b> )				
Open Flow Deliverabilty				Test Date					API No. 15				
		,,	· · · · · ·						15-	023-21313-0			
Company Noble Energy Inc					Lease R. Zweygardt				Well Number 44-32				
County Location Cheyenne S2-SE-SE				Section TWP 32 5S				RNG (E 39W	<b>(</b> ₩)	Α	cres Attributed		
Field Prairie Star					Reservoir Niobrara				Gas Gathering Cor Kinder Morgan		ection		
Completion Date 6/3/2011					Plug Bac 1519'	ck Total Depth			Packer Set at				
Casing Size 7", 4-1/2"			Weigh: 17#, 1		Internal Diameter 9-7/8", 6-1/4"		Set at 391,1559'		Perforations 1336'		то 1362'		
Tubing S 2-3/8'	Tubing Size Weight 2-3/8' 4.7#				Internal Diameter 1.995		Set at Perforati		rations	То			
	Type Completion (Describe) Single (gas)				Type Fluid Production Saltwater			Pump Unit or Traveling Plunge Yes		Plunger? Yes	No		
Producin		(An	nulus / Tubing	)	% (	% Carbon Dioxide			% Nitrogen		Gas Gra	Gas Gravity - G	
Tubing	Donth/I										/Mata- D	\ (D \ O'	
Vertical Depth(H) Pressure Taps (Meter Run) (Prover) Size													
Pressure	Buildu	ıp:	Shut in 6/8	2	o 11 at 1	0:00	(AM) (PM)	Taken		20	at	(AM) (PM)	
Well on L	_ine:		Started 6/20		0 <u>11</u> at <u>1</u>	1.45	$\stackrel{\smile}{=}$				at		
						OBSERVE	D SURFACE	DATA			Duration of Shut-in	289 Hours	
Static / Oynamic Property	ynamic Size		Circle one:  Meter  Prover Pressuit  psig (Pm)	Pressure Differential in Inches H <sub>2</sub> 0	Flowing Temperature t	Well Head Temperature t	re (P <sub>w</sub> ) or (P <sub>t</sub> ) or (P <sub>c</sub> )		Tubing Wellhead Pressure $(P_w) \circ (P_t) \circ (P_c)$		Duration (Hours)	Liquid Produced (Barrels)	
Shut-In		···	pary (i iii)	manes ri <sub>2</sub> 0	_		205	psia	psig	psia		<u>-</u>	
Flow													
			. ,			FLOW STR	EAM ATTRI	BUTES	1		<u> </u>	<u>'</u>	
Plate Coeffiecient (F <sub>b</sub> ) (F <sub>p</sub> ) Mcfd		Pro	Circle one: Meter or over Pressure psia	Press Extension P <sub>m</sub> x h	Gravity Factor F <sub>g</sub>		Flowing emperature Factor F <sub>n</sub>	Fa	iation ictor Py	Metered Flow R (Mcfd)	y GOR (Cubic Fee Barrel)	Flowing Fluid Gravity G_	
								<u> </u>					
(0.)2			/D \2		-	OW) (DELIV	•				_	= 0.207	
(P <sub>c</sub> ) <sup>2</sup> =		<u> </u>	(P <sub>w</sub> ) <sup>2</sup> =_	hoose formula 1 or 2	P <sub>a</sub> =	<u>———"</u>	1	- 14.4) +	3	<del>:</del>	(P <sub>d</sub> ) <sup>2</sup>	<u>-                                      </u>	
$(P_c)^2 - (P_A)^2$ or $(P_a)^2 - (P_d)^2$		(F	P <sub>c</sub> ) <sup>2</sup> - (P <sub>w</sub> ) <sup>2</sup>	1. P <sub>c</sub> <sup>2</sup> · P <sub>a</sub> <sup>2</sup> 2. P <sub>c</sub> <sup>2</sup> · P <sub>a</sub> <sup>2</sup> Widow by: P <sub>c</sub> <sup>2</sup> · P <sub>a</sub> <sup>2</sup>	p p 2 p 2 LOG of formula 1. or 2.		Backpressure Curv Slope = "n"or Assigned Standard Slope		n x LOG		Antilog	Open Flow Deliverability Equals R x Antilog (Mctd)	
	]				<u> </u>								
Open Flow Mcfd @ 14.65 psia					Deliverability McI			Mcfd @ 14.65 psia	ofd @ 14.65 psia				
				behalf of the						ovember	rt and that he has	knowledge of, 20 11	
			Witness (il	any)		<del></del>	_		ren	for C	company	ECEIVED-	
			For Comme	ssion					V	Chec	ked by	C 1 3 2011	

	declare under penalty of perjury under the laws of the state of Kansas that I am authorized to request of status under Rule K.A.R. 82-3-304 on behalf of the operator Noble Energy Inc
	nat the foregoing pressure information and statements contained on this application form are true and
	et to the best of my knowledge and belief based upon available production summaries and lease records
	ipment installation and/or upon type of completion or upon use being made of the gas well herein named.
-	nereby request a one-year exemption from open flow testing for the R Zweygardt 44-32
	ell on the grounds that said well:
J	
	(Check one)
	is a coalbed methane producer
	is cycled on plunger lift due to water
	is a source of natural gas for injection into an oil reservoir undergoing ER
	is on vacuum at the present time; KCC approval Docket No.
	is not capable of producing at a daily rate in excess of 250 mcf/D
	urther agree to supply to the best of my ability any and all supporting documents deemed by Commission
staff a	s necessary to corroborate this claim for exemption from testing.
Date: .	11/28/2011
	Signatura Charles (bloom
	Signature:
	Title: Regulatory Analyst II

Instructions:

>

If a gas well meets one of the eligibility criteria set out in KCC regulation K.A.R. 82-3-304, the operator may complete the statement provided above in order to claim exempt status for the gas well.

At some point during the current calendar year, wellhead shut-in pressure shall have been measured after a minimum of 24 hours shut-in/buildup time and shall be reported on the front side of this form under **OBSERVED SURFACE DATA**. Shut-in pressure shall thereafter be reported yearly in the same manner for so long as the gas well continues to meet the eligibility criterion or until the claim of eligibility for exemption **IS** denied.

The G-2 form conveying the newest shut-in pressure reading shall be filed with the Wichita office no later than December 31 of the year for which it's intended to acquire exempt status for the subject well. The foreign signed and dated on the front side as though it was a verified report of annual test results.

DEC 1 3 2011



## **NATURAL GAS ANALYSIS**

PROJECT NO.:

201109152

ANALYSIS NO.:

COMPANY NAME:

**NOBLE ENERGY** 

ANALYSIS DATE:

**OCTOBER 4, 2011** 

ACCOUNT NO.:

YUMA

SAMPLE DATE:

**SEPTEMBER 22, 2011** 

PRODUCER:

TO:

LEASE NO.:

E1502321313

EFFECTIVE DATE: NOVEMBER 1, 2011

NAME/DESCRIP.: R ZWEYGARDT 44-32

\*\*\*FIELD DATA\*\*\*

**JOSHUA WALTERS** 

CYLINDER NO.:

640

SAMPLED BY: SAMPLE PRES.: SAMPLE TEMP.:

49 76 AMBIENT TEMP.: **GRAVITY:** 

**SAMPLE TYPE: SPOT** FIELD COMMENTS: NO PROBE

VAPOR PRES.:

LAB COMMENTS:

	NORM.	GPM @	GPM @		
COMPONENTS	MOLE%_	14.65	14.73		
HELIUM	0.11	-	-		
HYDROGEN	0.00	-	-		
OXYGEN/ARGON	0.05	•	-		
NITROGEN	4.38	•	-		
CO2	0.62	•	-		
METHANE	92.83	-	-		
ETHANE	1.38	0.367		0.369	
PROPANE	0.43	0.118		0.118	
ISOBUTANE	0.07	0.023		0.023	
N-BUTANE	0.08	0.025		0.025	
ISOPENTANE	0.02	0.007		0.007	
N-PENTANE	0.01	0.004		0.004	
HEXANES+	0.02	0.009		0.009	
TOTAL	100.00	0.553	•	0.555	
BTU @ 60 DEG F		14.65		14.73	
NET DRY REAL =		881.8		886.6	
NET WET REAL =		866.4		871.2	
GROSS DRY REAL =		978.8		984.2	
GROSS WET REAL =		961.7		967.1	
RELATIVE DENSITY REAL	(AIR=1 @ 14.696 PSIA 60F):	0.5929			
COMPRESSIBILITY FACTOR	R :	0.99801			

NOTE: REFERENCE GPA 2261(ASTM D1945), 2145, & 2172 CURRENT PUBLICATIONS

THIS DATA HAS BEEN ACQUIRED THROUGH APPLICATION OF CURRENT STATE-OF-THE-ART ANALYTICAL TECHNIQUES. THE USE OF THIS INFORMATION IS THE RESPONSIBLITY OF THE USER. EMPACT ANALYTICAL SYSTEMS, ASSUMES NO RESPONSIBLITY FOR ACCURACY OF THE REPORTED INFORMATION NOR ANY CONSEQUENCES OF IT'S APPLICATION.

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